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AUTHOR	Rookey, T. Jerome
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ABSTRACT

An attempt was made to determine what factors relate to achievement in language arts, mathematics, and certain attitudes in an individualized programmed instruction school. A total of 87 fifth grade pupils were tested both in the Fall and Spring using the Commonwealth of Pennsylvania's Pennsylvania Questionnaire and the Stanford Achievement Test. These data as well as pupil socioeconomic data were used to form a correlation matrix. The data were then subjected to a stepwise multiple regression routine using various posttests as the dependent variable. The results indicated that for the Stanford test data, the achievement continuum was consistent and significant, and suggested that there is a need for a greater emphasis on pupil creativity in language arts. For arithmetic, the general achievement level in the Fall was less important to Arithmetic Application than to Concepts or Comprehension; the Creative Ability test figured prominently in all three subtests while the Creative Attitude test played a minor role. For non-Stanford data, academic achievement seemed to be a necessary correlate for Creative Ability but not for Creative Attitude; self-concept was influenced mainly by affective rather than cognitive variables, and attitude toward school measured slightly with everything. A total of 18 multiple regression tables are included. (JS)

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CORRELATES OF ACHIEVEMENT IN AN IPI SCHOOL

July, 1972

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RESEARCH FOR BETTER SCHOOLS INC.
1700 MARKET STREET, SUITE 1700
PHILADELPHIA, PA. 19103

ED 069723

CORRELATES OF ACHIEVEMENT IN AN IPI SCHOOL

July, 1972

(72-5-3)

T. Jerome Rookey

John A. Dow
Program Director
Individualizing Learning Program

Robert G. Scanlon
Executive Director

Research for Better Schools, Inc.
1700 Market Street
Philadelphia, Pa. 19103

A. Problem

It is of interest to the designers of curricula to know what factors relate to pupil achievement. The question addressed in this study was what factors relate to achievement in Language Arts, Mathematics, and certain attitudes in an IPI school.

B. Method

Pupils were tested in the Fall and Spring using the Commonwealth of Pennsylvania's Pennsylvania Questionnaire and the Stanford Achievement Test. This data, along with pupil socioeconomic data, were submitted to form a correlation matrix. The data were then subjected to a Stepwise Multiple Regression routine using various posttests as the dependent variable.

The sample was all 87 fifth-grade pupils attending a central Pennsylvania IPI school.

A .05 level of significance was accepted.

C. Results

(1) Language Arts

The three variables studied as representative of the Language Arts were the three Stanford Achievement Subtests: Word Meaning, Paragraph Meaning, and Language. The posttest of each was used as a dependent variable.

Consulting the correlation matrix for Word Meaning Posttest, it can be seen that all of the Stanford scores except the pretest of math comprehension related significantly. It can also be seen that the pre-

test and posttest of both Creative Ability and Creative Attitude related significantly. The posttest of Citizenship and Vocational Maturity also related significantly to Word Meaning.

The Multiple Regression on Word Meaning posttest is presented in Table 2. The variables entered are listed in the order they entered. The Multiple R is a cumulative index. It can be seen that Paragraph Meaning posttest was the greatest contributor with the Fall summated Stanford score as the second contributor. After these first two entries, there was very little gain in accountable variance.

In the correlation matrix, it can be seen that all of the Stanford scores related significantly to the posttest of Paragraph Meaning. Both the pretest and posttest of Creative Ability related significantly. The pretest of Creative Attitude related significantly. The posttests of Citizenship and Vocational Maturity related significantly to the posttest of Paragraph Meaning.

From Table 3 it is apparent that the posttests of Language, Word Meaning, and Arithmetic Application are the most potent contributors to the Multiple Regression. Note that Arithmetic Application pretest and posttest precede such variables as Creativity and Attitude Toward School.

The correlations with the Language posttest followed a pattern similar to Paragraph Meaning and Word Meaning. All of the Stanford scores correlated significantly. Both the pretest and posttest of Creative Ability and Vocational Maturity correlated significantly. The pretest of Creative Attitude correlated significantly. There were significant relationships with the posttests of Citizenship and Preparation for a Changing World.

It can be seen on Table 4 that the Fall summated Stanford score was the best predictor of the Language posttest. The Paragraph Meaning posttest was the second contributor after which the efficiency of the entrants was minimal.

(2) Mathematics

The three variables studied as indicators of mathematic achievement were the three Stanford Achievement Subtests: Arithmetic Comprehension, Arithmetic Concepts, and Arithmetic Application. The posttest of each was used as a dependent variable.

From the correlation matrix, it can be seen that all of the Stanford scores correlated significantly with the posttest of Arithmetic Comprehension. Both the pretest and posttest of Vocational Maturity correlated significantly. The posttests, Creative Ability, Attitude Toward School, and Preparation for a Changing World, related significantly also.

The Multiple Regression reported on Table 5 shows that the Fall summated Stanford score is the single largest contributor. The addition of the Creative Ability posttest raises the Multiple R considerably.

In the correlation matrix the other Stanford scores again all related significantly to the dependent variable, Arithmetic Concepts. The only non-Stanford score to correlate significantly was Creative Ability which related for both pretest and posttest.

The Multiple Regression for Arithmetic Concepts posttest, Table 6, shows that the Fall summated Stanford score is the single largest contributor. The posttests of Arithmetic Application, Self-Concept, and Vocational Maturity are potent entrants.

Inspecting the correlation matrix for Arithmetic Application posttest, it can be seen that all of the Stanford scores relate significantly. The pretest and posttest of Creative Ability correlate significantly as well as the posttest of Preparation for Changing World.

The Multiple Regression depicted in Table 7 shows that Paragraph Meaning is the most important contributor, even more important than the pretest of Arithmetic Applications. Creative Ability posttest is also a reasonably large contributor.

(3) Non-Stanford Data

The first non-Stanford score examined was Creative Ability. On the correlation matrix, it can be seen that the Creative Ability posttest related significantly to all of the pretests and posttests of the Stanford Achievement Test. It also related to the posttest of Preparation for a Changing World.

In Table 8, it can be seen that Arithmetic Comprehension posttest was the single most potent contributor. The pretest and gain scores of Creative Ability followed Arithmetic Comprehension.

The second non-Stanford variable was Creative Attitude. The only Stanford variable which related significantly in the correlation matrix was the posttest of Word Meaning. The posttest and gain scores of Self-Concept and Vocational Maturity related significantly to the Creative Attitude posttest. The posttests of Citizenship and Preparation for a Changing World, as well as the gain score of Attitude Toward School, related significantly. The measures own pretest also related significantly.

From Table 9, it can be seen that Vocational Maturity posttest was by far the greatest contributor to the Multiple R of Creative Attitude. The measures own gain score followed.

The third variable examined was the Self-Concept posttest. From the correlation matrix, it can be seen that the posttest and gain of Creative Attitude correlated significantly. The posttests of Attitude Toward School, Attitude Toward Others, Citizenship, Vocational Maturity, and Preparation for Change all related significantly to the posttest of Self-Concept.

In Table 10, it is shown that Creative Attitude posttest was the largest contributor to the Multiple R. The posttest of Attitude Toward Others also was a large contributor.

The posttest of Attitude Toward School correlated significantly with three of the Stanford Language Arts pretests: Word Meaning, Paragraph Meaning, and Language. It also correlated significantly with the pretest and posttest of Arithmetic Application and the pretest of Arithmetic Comprehension. Both the pretest and posttest of Vocational Maturity related significantly to Attitude Toward School. The Creative Attitude pretest and Citizenship posttest also correlated significantly with Attitude Toward School.

As can be seen in Table 11, there are more variables contributing less when summed than in any of the previously examined tables. The Citizenship posttest and Creative Attitude pretest are the initial two variables, but they only explain 28% of the variance. In fact, the sum of the 15 variables only explains 56% of the variance in the posttest of Attitude Toward School.

(4) Other Data

Other variables reported but not discussed here are Vocational Maturity, Citizenship, Attitude Toward Others, Preparation for Change, Appreciation of Human Accomplishment, Stanford Spelling, and Stanford Word Study Skills.

D. Discussion

(1) Language Arts

The prevalence of Stanford scores as significant correlates of all three subtests leads one to consider achievement as its own best friend. There is simply no way to get around the fact that the continuum of achievement is both consistent and significant in the Language Arts.

The consistent display of significant contribution by both Creative Attitude and Creative Ability in all three subtests suggests a need for great emphasis on pupil creativity in the Language Arts curricula.

(2) Mathematics

It is interesting that the various attitude measures played such a small part in the variance of all three subtests. Only in Arithmetic Concepts could attitude be said to play a major role at all.

As in Language Arts, the preponderant contributor was achievement on the other Stanford subtests. One should note that on Arithmetic Comprehension and Arithmetic Concepts the Fall summated Stanford score is the major contributor. On Arithmetic Applications the Fall summated Stanford score does not appear in the Multiple Regression equation at all. This seems to indicate that the general achievement level in the Fall is less important to Arithmetic Application than to Concepts or Comprehension.

The Creative Ability test figured highly in all three subtests while the Creative Attitude test played a very minor role.

(3) Non-Stanford Data

For Creative Ability, it would seem that academic achievement is a necessary correlate.

For Creative Attitude, it would seem that academic achievement is definitely not a correlate. The affective milieu would seem to describe the necessary conditions of Creative Attitude.

Self-Concept seems to be influenced predominantly by affective rather than cognitive variables. However, the role of the cognitive is potent enough to preclude its inclusion as a functionary.

The Attitude Toward School measured slightly with everything and greatly with nothing. There seems to be a gestalt comprised of many interacting fragments.

TABLE 1-A

	Sex	Race	Fanani Pre	Posttest	Fanani Gain	Attitude Toward Others Pre	Attitude Toward Others Posttest	PACT Pre	Posttest	PACT Gain	Self-Concept Pre	Posttest	Appreciation of Human Accomplishment Pre	Posttest	Preparation for Changing World Pre	Posttest	Health Test Fall	Citizenship Pre	Posttest	SAT Word Meaning Pre	Posttest	SAT Paragraph Meaning Pre	Posttest	SAT Spelling Pre	Posttest	SAT Word Study Skills Pre	Posttest	SAT Language Pre	Posttest
Sex																													
Race																													
Fanani Pre																													
Posttest																													
Fanani Gain																													
Attitude Toward Others Pre																													
Posttest																													
PACT Pre																													
Posttest																													
PACT Gain																													
Self-Concept Pre																													
Posttest																													
Human Accomplishment Pre																													
Posttest																													
Changing World Pre																													
Posttest																													
Health Test Fall																													
Citizenship Pre																													
Posttest																													
SAT Word Meaning Pre																													
Posttest																													
SAT Paragraph Meaning Pre																													
Posttest																													
SAT Spelling Pre																													
Posttest																													
SAT Word Study Skills Pre																													
Posttest																													
SAT Language Pre																													
Posttest																													
SAT Math Comprehension Pre																													
Posttest																													
SAT Math Concepts Pre																													
Posttest																													
SAT Math Application Pre																													
Posttest																													
Vocational Maturity Pre																													
Posttest																													

TABLE I-B

	Sex	Race	Fanani Pre	Posttest	Fanani Gain	Attitude Toward Others Pre	Posttest	PACT Pre	Posttest	PACT Gain	Self-Concept Pre	Posttest	Appreciation of Human Accomplishment Pre	Posttest	Preparation for Changing World Pre	Posttest	Health Test Fall	Citizenship Pre	Posttest	SAT Word Meaning Pre	Posttest	SAT Paragraph Meaning Pre	Posttest	SAT Spelling Pre	Posttest	SAT Word Study Skills Pre	Posttest	SAT Language Pre	Posttest
SAT Summ Fall	.361	.226	.392*	.338*	-.010	.124	.107	.165	.270	.158	.309	.094	.338*	.003	.111	.336	.154	.359*	.394*	.731*	.731*	.722*	.734*	.699*	.699*	.770*	.654*	.757*	.769*
Att. Toward School Pre	-.019	.081	-.166	-.052	.335	.096	.042	.025	.158	.151	-.081	.306	.035	.159	-.056	.101	.010	.231	.042	.098	.169	.046	.029	.195	.014	.000	.067	.025	-.033
Posttest	.154	.059	.055	.058	-.044	-.096	-.033	.284*	.245*	.167	-.201	-.018	.157	.152	.007	.055	.169	.272*	.391*	.332*	.321	.347*	.166	.234*	.184*	.152	.200	.252*	.249*
Others Gain	.211	-.035	.115	-.061	-.110	-.196*	.421*	.014	.024	.224*	.008	-.034	.061	.050	.028	.209	.014	.021	.099	.159	-.020	-.001	.037	-.074	.038*	-.117	-.032	-.067	.064
Self Gain	.097	.057	.056	.214*	.331*	.235*	.312*	.344*	.421*	.402*	.721*	.093	.263	.154	.036	.334	.263	.240	.155	.124	.135	.041	.007	.105	.116	.098	.121	.076	
Human Accomplishment Gain	-.204*	-.042	.105	.065	.125	.076	.101	-.123	.097	.209	.038	.019	-.172*	.534*	.205	.096	.161	-.051	-.051	-.105	-.022	.122	-.092	-.192	-.043	-.109	.069	-.115	
Changing World Gain	.050	.199	.139	.169	.022	-.021	.139	.057	.143	.034	-.013	.132	.090	.061	.125	.569*	.325*	.059	.027	.030	.067	.044	.074	.027	-.009	-.125	.047	.058	.099	
Citizenship Gain	.040	.002	.048	.007	.021	.099	.002	.203	.376*	.292*	.131	.162	.082	.210	.096	.011	.168	.118	.427*	.307*	.209*	.396*	.336	.141	.246	.282	.142	.177	.167	
Word Meaning Gain	.155	.015	.137	.196	.023	.058	.228	.098	.070	.035	.205	.233	.172	.092	.148	.090	.198	.045	.239	.405*	.002	.164	.023	.165	.133	.267	.111	.125		
Paragraph Meaning Gain	.162	.155	.315	.345*	.069	.056	.136	.006	.035	.078	.056	.015	.004	.057	.064	.154	.057	.123	.016	.316*	.166	.316*	.166	.376*	.312*	.310	.181	.302*		
Spelling Gain	.157	.043	.194	.336	.054	.045	.013	.068	.078	.124	.098	.197	.241	.123	.009	.201	.035	.013	.052	.155	.399*	.316*	.209*	.092	.394*	.394*	.113	.316*		
Word Study Skills Gain	.038	.165	.142	.098	.006	.043	.006	.005	.004	.008	.217	.033	.270	.101	.004	.017	.021	.003	.105	.095	.267	.210	.254	.103	.254	.243	.024	.312		
Language Gain	.151	.010	.275	.278	.054	.130	.102	.007	.011	.038	.342	.015	.038	.205	.001	.183	.078	.015	.340*	.342*	.270	.320*	.301*	.342*	.343*	.300*	.139			
Math Comprehension Gain	.055	.004	.213*	.339*	.006	.004	.035	.097	.125	.156	.130	.046	.188	.042	.075	.241	.010	.004	.221	.186	.376	.179	.377	.349	.293*	.340*	.270	.194*	.345	
Math Concepts Gain	.132	.031	.072	.155	.152	.093	.155	.078	.059	.011	.004	.045	.048	.191	.185	.002	.006	.171	.059	.059	.023	.105	.114	.094	.000	.024	.023	.111	.015	
Math Application Gain	.019	.092*	.323*	.494*	.494*	.053	.182	.057	.072	.035	.031	.056	.043	.044	.201	.114	.015	.055	.410*	.353*	.413*	.490*	.377*	.217	.266	.376*	.317*	.376*	.376*	.394*
Vocational Gain	.159	.199	.097	.345*	.070	.018	.006	.256*	.498*	.121	.007	.155	.035	.019	.021	.129*	.013	.129*	.490*	.377*	.217	.266	.376*	.396*	.426*	.396*	.371*	.394*		
School Attitude Gain	.034	.020	.069	.020	.369	.176	.395*	.228*	.302*	.311	.455*	.496*	.193	.190	.072	.018	.157	.101	.456*	.243*	.170	.193	.119	.005	.164	.047	.157	.047	.016	
Time I.P.I.	×	.566*	.172	.265*	.193	.190	-.126	-.075	-.153	.264*	.094	-.195	.185	.167	-.152	.592*	-.071	.095	-.172	.165	.194	.163	.172	.169	.050	.164	.094	.169	.205	

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TABLE 1-C

	SAT Math Comprehension Pre	Posttest	SAT Math Concepts Pre	Posttest	SAT Math Appli-cation Pre	Posttest	Vocational Maturity Pre	Posttest	SAT Sum Fall	Att. Toward School Pre	Posttest	Att. Toward Others Gain	Self Gain	Human Accom-plishment Gain	Changing World Gain	Citizenship Gain	Word Meaning Gain	Paragraph Meaning Gain	Spelling Gain	Word Study Skills Gain	Language Gain	Math Compre-hension Gain	Math Concepts Gain	Math Appli-cation Gain	Vocational Gain	School Attitude Gain	Time I.P.I.
SAT Math Comprehension Pre	-	.478																									
Posttest	.478	-	.552		.577		.534		.511																		
SAT Math Concepts Pre		.552	-	.615	.432		.550																				
Posttest		.577	.615	-	.559																						
SAT Math Appli-cation Pre		.534	.432	.559	-	.634																					
Posttest		.511	.550		.634	-	.660																				
Vocational Maturity Pre						.660	-	.696	.425																		
Posttest							.696	-	.491																		
SAT Sum Fall							.425	.491	-																		
Att. Toward School Pre										-	.704																
Posttest										.704	-	.720															
Att. Toward Others Gain											.720	-	.614														
Self Gain												.614	-	.661													
Human Accom-plishment Gain													.661	-	.633												
Changing World Gain														.633	-	.655											
Citizenship Gain															.655	-	.657										
Word Meaning Gain																.657	-	.665									
Paragraph Meaning Gain																	.665	-	.665								
Spelling Gain																		.665	-	.670							
Word Study Skills Gain																			.670	-	.679						
Language Gain																				.679	-	.679					
Math Compre-hension Gain																					.679	-	.679				
Math Concepts Gain																						.679	-	.679			
Math Appli-cation Gain																							.679	-	.679			
Vocational Gain																								.679	-	.679	
School Attitude Gain																									.679	-	.679
Time I.P.I.																										.679	-

Table 2

MULTIPLE REGRESSION ON WORD MEANING (POST)

	Variable Entered	Multiple R
1	Paragraph (Post)	0.7965
2	SAT Sum	0.8319
3	Arithmetic Comp. (Pre)	0.8447
4	Word Study Skills (Post)	0.8570
5	PACT (Post)	0.8670
6	Language (Post)	0.8707
7	Arithmetic Application (Post)	0.8756
8	Arithmetic Application (Pre)	0.8799
9	Citizenship (Post)	0.8847
10	PACT (Pre)	0.8881
11	Citizenship (Pre)	0.8907
12	Human Accomplishment (Post)	0.8921
13	Attitude Toward School (Post)	0.8939
14	Self-Conception (Post)	0.8963
15	Vocational Maturity (Pre)	0.8989

Table 3

MULTIPLE REGRESSION ON PARAGRAPH-POST

	Variable Entered	Multiple R
1	Language (Post)	0.8003
2	Word Meaning (Post)	0.8486
3	Arithmetic Application (Post)	0.8771
4	Arithmetic Application (Pre)	0.8864
5	Word Meaning (Pre)	0.8970
6	PACT (Post)	0.9031
7	Human Accomplishment (Pre)	0.9074
8	Citizenship (Pre)	0.9104
9	Arithmetic Comp. (Pre)	0.9131
10	Citizenship (Post)	0.9169
11	Attitude Toward School (Post)	0.9201
12	PACT (Pre)	0.9244
13	Arithmetic Concept (Post)	0.9264
14	Human Accomplishment (Post)	0.9283
15	Arithmetic Comp. (Post)	0.9302

Table 4

MULTIPLE REGRESSION ON LANGUAGE-POST

	Variable Entered	Multiple R
1	SAT Sum	0.8180
2	Paragraph (Post)	0.8647
3	Spelling (Post)	0.8765
4	Language (Pre)	0.8882
5	Words Skill Study (Post)	0.8973
6	Human Accomplishment (Pre)	0.9056
7	Arithmetic Concepts (Post)	0.9126
8	Attitude Toward School (Pre)	0.9214
9	Attitude Toward School (Post)	0.9249
10	Self-Concept (Pre)	0.9283
11	Attitude Toward Others (Pre)	0.9306
12	Spelling (Pre)	0.9323
13	SAT Sum	0.9323
14	Preparation for Change (Pre)	0.9341
15	Citizenship (Pre)	0.9357

* Variable removed

Table 5

MULTIPLE REGRESSION ON ARITHMETIC COMP. POST

	Variable Entered	Mulitiple R
1	SAT Sum	0.6392
2	Fanani (Post)	0.7244
3	Word Meaning (Pre)	0.7467
4	Arithmetic Concepts (Post)	0.7659
5	Prepare for Change (Post)	0.7741
6	Paragraph (Pre)	0.7792
7	Fanani (Pre)	0.7832
8	IPI Years	0.7863
9	RACE	0.7945
10	Word Study Skills (Pre)	0.7980
11	Arithmetic Application (Post)	0.8006
12	Citizenship (Post)	0.8030
13	PACT (Pre)	0.8044
14	Self-Concept (Post)	0.8060
15	Language (Pre)	0.8074

Table 6

MULTIPLE REGRESSION ON ARITHMETIC CONCEPTS-POST

	Variable Entered	Multiple R
1	SAT Sum	0.7209
2	Arithmetic Application (Post)	0.7710
3	Self-Concept (Post)	0.7795
4	Vocational Maturity (Post)	0.7986
5	Spelling (Post)	0.8061
6	Language (Post)	0.8172
7	Preparation for Change (Post)	0.8243
8	Arithmetic Comp. (Post)	0.8317
9	Human Accomplishment (Pre)	0.8363
10	Attitude Toward Others (Post)	0.8412
11	Word Meaning (Pre)	0.8443
12	Word Study Skills (Pre)	0.8461
13	Vocational Maturity (Pre)	0.8479
14	PACT (Post)	0.8491
15	Attitude Toward Schools (Pre)	0.8511

Table 7

MULTIPLE REGRESSION ON ARITHMETIC APPLICATION-POST

	Variable Entered	Multiple R
1	Paragraph (Post)	0.7524
2	Arithmetic Application (Pre)	0.8184
3	Fanani (Post)	0.8461
4	Arithmetic Concepts (Post)	0.8590
5	Word Meaning (Post)	0.8652
6	Language (Post)	0.8706
7	Fanani Gain	0.8770
8	Arithmetic Concepts (Pre)	0.8818
9	PACT (Pre)	0.8866
10	Health (Pre)	0.8896
11	Preparation for Change (Post)	0.8916
12	Self-Concept (Post)	0.8932
13	Human Accomplishment (Post)	0.8944
14	Attitude Toward School (Post)	0.8955
15	Citizenship (Post)	0.8965

Table 8

MULTIPLE REGRESSION ON FANANI-POST

	Variable Entered	Multiple R
1	Arithmetic Comp. (Post)	0.5909
2	Fanani (Pre)	0.6692
3	Fanani Gain	0.7565
4	Human Accomplishment (Post)	0.7760
5	Attitude Toward School (Pre)	0.7941
6	WSS (Pre)	0.8065
7	Vocational Maturity (Pre)	0.8175
8	Paragraph (Pre)	0.8236
9	Attitude Toward Others (Post)	0.8288
10	IPI Years	0.8336
11	Paragraph (Post)	0.8363
12	Word Meaning (Post)	0.8417
13	Vocational Maturity (Post)	0.8471
14	PACT (Post)	0.8549
15	Attitude Toward School (Post)	0.8586

Table 9

MULTIPLE REGRESSION ON PACT POST

	Variable Entered	Multiple R
1	Vocational Maturity (Post)	0.8217
2	PACT Gain	0.9110
3	Attitude Toward School (Pre)	0.9186
4	Vocational Maturity (Pre)	0.9248
5	Attitude Toward Others (Post)	0.9307
6	Attitude Toward School (Post)	0.9368
7	Arithmetic Applic. (Pre)	0.9400
8	Self-Concept (Pre)	0.9425
9	PACT (Pre)	0.9445
10	Self-Concept (Post)	0.9461
11	Citizenship (Pre)	0.9472
12	Language (Pre)	0.9482
13	Spelling (Post)	0.9506
14	Fanani (Post)	0.9514
15	Arithmetic Comp. (Post)	0.9523

Table 10

MULTIPLE REGRESSION ON SELF-CONCEPT POST

	Variable Entered	Multiple R
1	PACT (Post)	0.6016
2	Attitude Toward Others (Post)	0.6942
3	Vocational Maturity (Post)	0.7122
4	Attitude Toward School (Pre)	0.7356
5	Self-Concept (Pre)	0.7479
6	Attitude Toward School (Post)	0.7664
7	Spelling (Pre)	0.7775
8	Arithmetic Concept (Post)	0.7922
9	Health (Pre)	0.7977
10	Spelling (Post)	0.8016
11	Arithmetic Application (Post)	0.8066
12	SAT Sum (Pre)	0.8092
13	Paragraph (Pre)	0.8138
14	Arithmetic Concepts (Pre)	0.8172
15	Citizenship (Pre)	0.8204

Table 11

MULTIPLE REGRESSION ON ATTITUDE TOWARD SCHOOL-POST

	Variable Entered	Multiple R
1	Citizenship (Post)	0.4575
2	PACT (Pre)	0.5339
3	Health	0.5744
4	Self-Concept (Post)	0.6136
5	Paragraph (Post)	0.6404
6	Human Accomplishment (Post)	0.6652
7	Arithmetic Concepts (Pre)	0.6852
8	Language (Pre)	0.6978
9	Arithmetic Comp. (Pre)	0.7060
10	PACT Gain	0.7151
11	Attitude Toward Others (Post)	0.7231
12	Attitude Toward Others (Pre)	0.7318
13	Arithmetic Concepts (Post)	0.7409
14	Word Meaning (Post)	0.7467
15	Human Accomplishment (Pre)	0.7513

Table 12

MULTIPLE REGRESSION ON VOCATIONAL MATURITY

	Variable Entered	Multiple R
1	PACT (Post)	0.8217
2	Attitude Toward School (Pre)	0.8428
3	Vocational Maturity (Pre)	0.8535
4	Human Accomplishment (Pre)	0.8654
5	Attitude Toward Others (Post)	0.8750
6	Preparation for Change (Post)	0.8849
7	Attitude Toward Others	0.8919
8	Citizenship (Pre)	0.8982
9	Citizenship (Post)	0.9042
10	Self-Concept (Post)	0.9091
11	Arithmetic Application (Pre)	0.9120
12	PACT Gain	0.9145
13	Fanani (Post)	0.9168
14	Fanani (Pre)	0.9188
15	Arithmetic Comprehension (Post)	0.9203

Table 13

MULTIPLE REGRESSION ON CITIZENSHIP-POST

	Variable Entered	Multiple R
1	Vocational (Post)	0.6237
2	Attitude Toward School (Post)	0.7027
3	Language (Pre)	0.7355
4	Preparation for Change	0.7554
5	Arithmetic Concepts (Pre)	0.7680
6	Paragraph (Post)	0.7824
7	PACT (Post)	0.7927
8	Human Accomplishment (Post)	0.8000
9	Arithmetic Comp. (Pre)	0.8055
10	Word Meaning (Post)	0.8118
11	Arithmetic Concepts (Post)	0.8171
12	Spelling (Post)	0.8232
13	PACT (Pre)	0.8278
14	Preparation for Change (Post)	0.8323
15	Arithmetic Application (Pre)	0.8359

Table 14

MULTIPLE REGRESSION ON ATTITUDE TOWARD OTHERS (POST)

	Variable Entered	Multiple R
1	Self-Concept (Post)	0.4448
2	Attitude Toward Others (Pre)	0.5415
3	Vocational Maturity (Post)	0.5966
4	Language (Post)	0.6309
5	Arithmetic Comp. (Pre)	0.6623
6	Fanani (Gain)	0.6846
7	Paragraph (Pre)	0.7037
8	PACT (Post)	0.7177
9	Attitude Toward School (Pre)	0.7392
10	Word Meaning (Pre)	0.7511
11	Citizenship (Pre)	0.7613
12	Preparation for Change (Post)	0.7725
13	Self-Concept (Pre)	0.7818
14	Arithmetic Concepts (Post)	0.7880
15	Human Accomplishment (Post)	0.7936

Table 15

MULTIPLE REGRESSION ON PREPARATION FOR CHANGE

	Variable Entered	Multiple R
1	IPI Years	0.3915
2	Arithmetic Comp. (Post)	0.4996
3	Vocational Maturity (Post)	0.5570
4	Fanani (Pre)	0.5796
5	Citizenship (Post)	0.5969
6	Self-Concept (Post)	0.6090
7	PACT Gain	0.6252
8	Arithmetic Application (Pre)	0.6332
9	Fanani (Post)	0.6388
10	Attitude Toward School (Pre)	0.6438
11	Human Accomplishment (Post)	0.6492
12	Spelling (Pre)	0.6542
13	Spelling (Post)	0.6657
14	Word Study (Post)	0.6746
15	Arithmetic Application (Post)	0.6791

Table 16

MULTIPLE REGRESSION ON HUMAN ACCOMPLISHMENT

	Variable Entered	Multiple R
1	Fanani Gain	0.4897
2	Attitude Toward School (Post)	0.5361
3	Fanani (Post)	0.5554
4	Fanani (Pre)	0.5955
5	Vocational Maturity (Pre)	0.6214
6	Paragraph (Pre)	0.6412
7	Self-Concept (Pre)	0.6571
8	Attitude Toward Others (Post)	0.6699
9	Arithmetic Concepts (Pre)	0.6789
10	Word Meaning (Pre)	0.6903
11	Human Accomplishment (Pre)	0.6981
12	Word Meaning (Post)	0.7048
13	Self-Concept (Post)	0.7118
14	Attitude Toward School (Pre)	0.7223
15	PACT (Post)	0.7314

Table 17

MULTIPLE REGRESSION ON SPELLING-POST

	Variable Entered	Multiple R
1	Language (Post)	0.7750
2	Spelling (Pre)	0.8112
3	Word Study Skills (Pre)	0.8368
4	IPI Years	0.8424
5	Preparation for Change	0.8504
6	Paragraphs (Post)	0.8538
7	Arithmetic Concepts (Post)	0.8577
8	SAT Sum	0.8623
9	Word Skill Study (Pre)	0.8666
10	Arithmetic Application (Pre)	0.8693
11	Paragraph (Pre)	0.8733
12	PACT (Pre)	0.8752
13	Vocational (Pre)	0.8777
14	Word Meaning (Pre)	0.8792
15	Fanani (Post)	0.8810

Table 18

MULTIPLE REGRESSION ON WORD STUDY SKILL-POST

	Variable Entered	Multiple R
1	Word Study Skill (Post)	0.7445
2	Paragraph (Post)	0.8124
3	Spelling (Post)	0.8302
4	Spelling (Pre)	0.8432
5	Human Accomplishment	0.8530
6	Self Concept (Pre)	0.8607
7	Word Meaning (Post)	0.8673
8	Language (Pre)	0.8730
9	PACT (Pre)	0.8787
10	SAT Sum	0.8829
11	Citizenship (Post)	0.8869
12	Preparation for Change	0.8907
13	Language (Post)	0.8943
14	Word Meaning (Pre)	0.8980
15	Preparation for Change (Post)	0.9009